

# TECHNICAL NOTES

## SURVEY UNIVERSE

The data collected in the fall 2001 Survey of Graduate Students and Postdoctorates in Science and Engineering<sup>1</sup> represent national estimates of graduate enrollment and postdoctoral employment as of fall 2001 in all academic institutions in the United States that granted doctorate or master's degrees in any science, engineering, or health-related field. Included are data for all branch campuses, affiliated research centers, and separately organized components such as medical or dental schools, schools of nursing, public health, etc. The survey universe consisted of 721 reporting units at 606 graduate institutions, including 242 master's-granting institutions and 483 reporting units associated with 364 doctorate-granting institutions.

The National Science Foundation (NSF) has collected data on graduate science and engineering (S&E) enrollment and postdoctoral appointees since 1966. From fall 1966 through fall 1971, data from a limited number of doctorate-granting institutions were collected through the NSF Graduate Traineeship Program, which requested data only on those S&E fields supported by NSF. Beginning with the fall 1972 survey, this data collection effort was assigned to NSF's Universities and Nonprofit Institutions Studies Group and was gradually expanded from 1972 to 1975 to include additional S&E and health fields as well as all institutions known to have programs leading to a master's or doctoral degree. Due to this expansion, data for 1974 and earlier years are not strictly comparable with 1975 and later data. Technical table 1 shows the number of institutions, reporting units, and departments at each level included in the data, as well as the total enrollment reported for each year between 1966 and 2001. No attempt has been made to inflate the data for 1966–74 to reflect universe totals.

Beginning with fall 1984 academic year, master's-granting institutions were surveyed on a sample basis. From 1984 through 1987, the survey design was a stratified random sample, with all doctorate-granting institutions, all master's-granting historically black colleges and universities, and all land-grant institutions included in the certainty stratum. The remaining master's-granting institutions were divided into two sample strata

on the basis of enrollment size. Data for sampled institutions for the years 1984–87 were reestimated in 1988 on the basis of 1983 and 1988 data. During the 1989 survey cycle, S&E field definitions were reviewed and some departments were deleted. Data for 1975–88 were adjusted to conform to the revised definitions.

The fall 1988 survey included the entire survey population for the first time since fall 1983. Since 1988, any institutions starting up S&E master's or doctoral programs have been added to the survey universe, and any that have closed all their S&E graduate programs have been deleted. (See "Survey Methodology," below.)

Technical tables 2 and 3 present data on departmental coverage by S&E field for doctorate- and master's-granting institutions for the last 8 years surveyed.

## SURVEY INSTRUMENTS

The survey questionnaire on which data are reported in this publication is essentially the same as that used for the 2000 collection. In addition to the questionnaire proper, each survey package also included the following:

- An enclosure detailing mailing package contents
- A flyer explaining NSF's academic S&E surveys
- A cover letter to survey coordinators at graduate schools or at medical schools
- A computer-generated List of Departments or Programs (NSF Form 811) specific to each institution surveyed and based on the departments known to exist in the previous survey cycle
- A crosswalk showing National Center for Education Statistics instructional program codes corresponding to each S&E field as defined by NSF
- A postcard for respondent use acknowledging receipt of the survey and indicating any changes in coordinator name, address, telephone number, or email address
- A flyer informing coordinators of their IDs and passwords to use in responding to the survey via the NSF-NIH Graduate Student Survey Web-Based Data Reporting System

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<sup>1</sup>See <http://www.nsf.gov/sbe/srs/sgss/start.htm> for a more detailed discussion of the methodology used in this survey.

- A sheet (“Accessing NSF Data on the Internet”) encouraging coordinators to view last year’s data on the web via the NSF Division of Science Resources Statistics home page

## SURVEY METHODOLOGY

The survey packages were mailed out by November 2, 2001. For the fourth year, schools had the option of reporting data using the NSF-NIH Graduate Student Survey Web-Based Data Reporting System; 467 schools elected to do so. The final survey universe consisted of 721 schools (reporting units) at 606 institutions.

In addition to the verification information cited above, the acknowledgment postcard also requested that institutional coordinators indicate how the data were collected, whether the data were maintained centrally or collected from individual departments, and whether they were derived from a computerized database or hand tabulated. Of the 721 reporting units surveyed, 98.5 percent have provided this information during the past 10 years. The majority of schools report a combination of sources for their data. Over the years, the use of computerized systems has shown a gradual but small increase, while the use of hand tabulation has slowly decreased.

Institutional coordinators were asked to review the departmental listing provided in the survey packet and to indicate any changes in their departmental structure such as departments newly formed, phased out, split, or merged; they were also asked to check off any departments that had neither graduate students nor postdoctorates and for which survey questionnaires would therefore not be submitted. The revised Form 811s were returned to NSF’s data processing contractor for use as a checklist in tracking departmental responses.

A survey questionnaire was completed for each department either centrally or at the department level and was returned to the data processing contractor for data entry, editing, and tabulation. Arithmetic errors, inconsistencies between items, and sharp year-to-year fluctuations were referred to the institutional coordinators for correction or clarification.

## RESPONSE RATE

Of the 721 reporting units included in the fall 2001 survey, 710—or 98.5 percent—were able to provide at least partial data, distributed as follows.

At the departmental level, 11,852 departments responded, or 99.0 percent of the 11,967 departments surveyed. Of these, 10,121 departments, or 84.6 percent of the total, provided complete responses. A total of 115 departments, or 1.0 percent of the departmental total, required complete imputation; 1,731, or 14.5 percent, had one or more data cells imputed. Technical table 4 presents the department response rates for earlier years for comparison.

Missing data for partially nonrespondent departments were imputed using the departments’ previous year’s data, where available, or data from peer institutions in cases where data had not been reported the previous year. Data for nonrespondent departments (those that did not provide any data) were imputed using data from the previous year, where available. The number of departments in doctorate- and master’s-granting institutions that required total or partial imputation, and the numbers and proportions of full- and part-time graduate students and postdoctorates imputed, are shown in technical tables 5 and 6. Imputation rates by survey data item are provided in technical table 7.

## CHANGES IN DATA ITEMS

Although NSF has attempted to maintain consistent trend data, some modifications in the survey questionnaire have been made to respond to changing issues over the past 25 years. As a result, some data items are not available for all institutions in all years.

Major changes in the data collected include the following:

- From 1975 through 1977, data for master’s-granting institutions were collected on a short form (i.e., an abbreviated form of the survey) which did not collect data on sex or citizenship of graduate students nor any data on postdoctoral appointees. In 1978, a similar questionnaire was sent to doctorate-granting institutions; master’s-granting institutions were not surveyed that year. This 1978 questionnaire did not collect data on mechanisms of support for full-time students. All mechanisms of support data for that year were combined on one line and appear as “other types of support” in any data tables. The 1978 figures shown in the tables for master’s-granting institutions represent estimates based on 1977 and 1979 data. Beginning in 1979, the full-scale survey form was sent to both doctorate- and master’s-granting institutions.

- Distribution by sex was originally requested only for full-time graduate students at doctorate-granting institutions. Beginning in 1976, master's-granting institutions were also asked to provide data on all graduate students by sex; in 1977, similar data were requested for all graduate students in all institutions. The short form used in 1978 did not request any information on sex; 1978 figures in the tables represent estimates based on 1977 and 1979 data.
- Citizenship data were collected only for graduate students enrolled full time in doctorate-granting institutions through 1977. No citizenship data were requested on the short form used for master's-granting institutions from 1975 through 1977 and for doctorate-granting institutions in 1978. Data on citizenship of all full-time graduate students are available beginning in 1979 and on those enrolled part time since 1983.
- Racial/ethnic data were first requested in 1979 and became a standard item on the questionnaire in 1980.
- The support mechanisms of "fellowships and traineeships" were combined on one line until 1979, when separate data on the two mechanisms were first collected.
- "Other nonfaculty research staff with doctorates" were combined with postdoctoral appointees until 1979.
- Separate data on students receiving their primary support from the U.S. Department of Agriculture were first requested in 1985.
- Racial/ethnic data by sex were first requested in 1993 and became a standard item on the questionnaire in 1994.
- Separate data on students receiving their primary support from the National Aeronautics and Space Administration were first requested in 1996.
- A new reporting option was incorporated into the 1998 graduate student survey which gave coordinators and departmental respondents the option of submitting their data through the World Wide Web. Using this new web-based option, schools could avoid manually filling out the paper survey and could obtain immediate feedback on their responses. This feedback helped coordinators and departmental respondents ensure that their data were accurate and complete. Using this option also enabled respondents to upload their own data files, speeding up the reporting process.
- In 1999, separate data on students receiving their primary support from the Department of Energy were requested.
- Respondents were presented with new race/ethnicity categories in 1999. The "Asian/Pacific Islander" category used in previous years' surveys was separated into an "Asian American" category and a "Native Hawaiian/Pacific Islander" category. Two new categories, "More than One Race Hispanic" and "More than One Race Non-Hispanic," were also added to the survey. The "Other" category, included in previous years' surveys, was removed from the 1999 survey. These changes are not reflected in the 2001 published tables. In each of the three years that these data were collected, only about 8 percent of the departments reported data in any of the new categories. This year, as in the previous two years, the data reported in the new categories were combined into the previous survey categories for table production. The data were collapsed into the following categories: the data in the "Asian" category were combined with those in the "Native Hawaiian/Pacific Islander" category; data in the "One Race Only Hispanic" category and the "More than One Race Hispanic" category were combined to produce the "Hispanic" category on the tables; and data in the "More than One Race Non-Hispanic" category were combined with the "Unknown" category to form the "Other or Unknown" category on the tables.
- Also, 1999 was the first year in which first-time enrollment by race/ethnicity was requested. These data are also not reflected in the 2001 published tables.

## DATA REVISIONS

During the fall 1988 survey cycle, the criteria for including departments in the survey universe were tightened, and all departments surveyed were reviewed. Those departments not primarily oriented toward granting research degrees were no longer considered to meet the S&E definition. As a result of this review, it was determined that a number of departments—primarily those in the field of "Social sciences, not elsewhere classified"—were engaged in training primarily teachers, practitioners, administrators, or managers rather than

researchers; these departments were deleted from the database. This process was continued during the 1989–97 survey cycles and expanded to ensure trend consistency for the entire 1975–97 period. As a result, total enrollments and social science enrollments for all years were reduced. The net effect of adjustments over the years is shown in technical table 8.

In fall 1992, the survey methodology changed so that the institution’s highest S&E degree in the current year would apply to all previous years in which that institution was surveyed. Since a number of master’s-granting institutions have become doctorate-granting institutions

over the years, the result has been a smaller decrease in enrollment at doctorate-granting institutions than at master’s-granting institutions.

The definition of medical schools was revised during the fall 1992 survey cycle to include only those institutional components that are members of the Association of American Medical Colleges. Tables generated after the fall 1992 survey differ from—and therefore should not be compared with—their earlier year counterparts in that they exclude schools of nursing, public health, dentistry, veterinary medicine, and other health-related disciplines.

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Technical Table 1. The NSF data collection series: 1966-2001

Year	Number of institutions surveyed	Number of reporting units surveyed	Number of departments surveyed			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full-time	Part-time
A. Graduate Traineeship Program								
1966 .....	204	204	2,866	441	2,425	169,303	124,255	45,048
1967 .....	209	209	3,014	434	2,580	179,622	133,972	45,650
1968 .....	219	219	3,190	454	2,736	184,759	140,714	44,045
1969 .....	224	224	3,354	460	2,894	196,341	147,515	48,826
1970 .....	227	227	3,544	473	3,071	201,918	153,250	48,668
1971 <sup>1</sup> .....	224	249	3,397	407	2,990	214,680	164,764	49,916
B. Survey of Graduate Students and Postdoctorates in Science and Engineering <sup>2</sup>								
Doctorate institutions:								
1972 .....	260	328	4,593	780	3,813	210,895	161,329	49,566
1973 .....	263	340	6,547	865	5,682	214,563	161,626	52,937
1974 .....	277	365	7,439	1,350	6,089	258,897	190,395	68,502
1975 .....	278	372	7,602	1,420	6,182	285,810	203,861	81,949
1976 .....	283	378	7,675	1,452	6,223	289,004	207,043	81,961
1977 .....	288	387	7,889	1,572	6,317	295,911	209,431	86,480
1978 .....	311	419	8,122	1,731	6,391	298,884	208,527	90,357
1979 .....	314	427	8,208	1,718	6,490	306,600	214,071	92,529
1980 .....	322	437	8,407	1,857	6,550	320,298	221,079	99,219
1981 .....	316	427	8,262	1,783	6,479	324,425	224,331	100,094
1982 .....	317	431	8,162	1,812	6,350	332,735	227,825	104,910
1983 .....	317	430	8,038	1,777	6,261	339,043	233,565	105,478
1984 .....	317	434	8,110	1,816	6,294	344,744	236,388	108,356
1985 .....	320	432	8,208	1,841	6,367	352,945	239,673	113,272
1986 .....	322	436	8,291	1,859	6,432	364,245	248,741	115,504
1987 .....	326	443	8,425	1,882	6,543	370,201	253,572	116,629
1988 .....	339	457	8,699	1,991	6,708	376,337	258,896	117,441
1989 .....	340	458	8,829	2,012	6,817	383,040	265,796	117,244
1990 .....	339	457	8,973	2,062	6,911	397,820	274,645	123,175
1991 .....	338	456	9,143	2,062	7,081	412,951	286,786	126,165
1992 .....	339	457	9,374	2,105	7,269	431,675	300,536	131,139
1993 .....	341	459	9,576	2,127	7,449	439,884	306,689	133,195
1994 .....	340	458	9,783	2,181	7,602	440,285	308,340	131,945
1995 .....	339	457	9,957	2,231	7,726	434,487	304,811	129,676
1996 .....	341	459	9,993	2,303	7,690	430,006	303,745	126,261
1997 .....	345	467	10,006	2,414	7,592	424,716	302,072	122,644
1998 .....	347	468	10,115	2,454	7,661	424,061	302,069	121,992
1999 .....	349	470	10,216	2,411	7,805	430,798	308,502	122,296
2000 .....	353	474	10,318	2,514	7,804	434,300	315,724	118,576
2001 .....	363	483	10,420	2,558	7,862	452,411	330,043	122,368

See explanatory information, if any, and SOURCE at end of table.

**Technical Table 2. Number of science, engineering, and health departments  
in doctorate-granting institutions, by detailed field: 1994-2001**

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Field	1994	1995	1996	1997	1998	1999	2000	2001
Total, all surveyed fields .....	9,783	9,957	9,993	10,006	10,115	10,216	10,318	10,420
Total, science and engineering fields .....	6,987	7,107	7,119	7,173	7,263	7,321	7,424	7,496
Sciences, total .....	5,629	5,723	5,721	5,745	5,801	5,851	5,912	5,994
Physical sciences, total .....	560	568	566	572	579	578	583	589
Astronomy .....	34	35	35	35	36	36	38	38
Chemistry .....	262	262	264	267	269	271	273	277
Physics .....	249	251	249	253	256	248	246	245
Physical sciences, n.e.c. ....	15	20	18	17	18	23	26	29
Earth, atmos., & ocean sci., total .....	334	348	347	350	361	358	362	362
Atmospheric sciences .....	32	33	33	32	33	32	33	33
Geosciences .....	206	210	211	209	209	205	204	205
Oceanography .....	46	50	48	49	54	56	55	53
Earth, atmos., & ocean sci., n.e.c. ....	50	55	55	60	65	65	70	71
Mathematical sciences, total .....	382	387	388	389	388	386	390	398
Mathematics & applied mathematics .....	302	305	305	307	307	304	305	313
Statistics .....	80	82	83	82	81	82	85	85
Computer sciences .....	259	270	278	285	295	305	320	334
Agricultural sciences .....	316	322	316	327	331	328	331	336
Biological sciences, total .....	1,967	1,983	1,966	1,944	1,964	1,980	1,974	1,986
Anatomy .....	101	98	97	93	90	88	86	86
Biochemistry .....	189	191	190	191	191	193	186	183
Biology .....	225	225	229	239	245	244	247	249
Biometry/epidemiology .....	71	72	72	72	73	73	73	75
Biophysics .....	33	33	34	31	31	31	30	31
Botany .....	104	101	98	95	94	88	86	87
Cell biology .....	121	125	125	126	139	140	147	147
Ecology .....	31	31	30	30	30	35	36	38
Entomology/parasitology .....	49	48	48	48	49	47	46	46
Genetics .....	82	84	83	82	82	84	86	90
Microbio., immunology, & virology .....	258	262	261	251	254	261	260	255
Nutrition .....	119	123	123	122	124	124	124	122
Pathology .....	143	144	139	138	135	134	132	133
Pharmacology .....	169	169	164	159	158	162	160	161
Physiology .....	144	146	144	138	133	133	130	125
Zoology .....	49	48	44	40	39	39	35	34
Biosciences, n.e.c. ....	79	83	85	89	97	104	110	124
Psychology, total .....	530	546	552	562	569	586	593	610
Psychology, general .....	165	163	160	166	170	173	179	181
Clinical psychology .....	116	123	127	130	130	131	130	137
Psychology, n.e.c. ....	249	260	265	266	269	282	284	292
Social sciences, total .....	1,281	1,299	1,308	1,316	1,314	1,330	1,359	1,379
Agricultural economics .....	53	54	54	54	55	55	55	55
Anthropology (cultural & social) .....	132	135	135	139	136	135	133	131
Economics (except agricultural) .....	202	201	196	197	195	196	199	200
Geography .....	98	99	98	100	101	100	101	103
History and philosophy of science .....	21	21	23	23	23	24	26	28
Linguistics .....	69	70	72	71	70	71	72	72
Political science .....	320	326	329	332	333	338	346	348
Sociology .....	175	176	174	173	173	175	177	181
Sociology/anthropology .....	25	24	24	24	23	23	23	23
Social sciences, n.e.c. ....	186	193	203	203	205	213	227	238
Engineering, total .....	1,358	1,384	1,398	1,428	1,462	1,470	1,512	1,502
Aerospace engineering .....	52	53	52	54	54	56	57	55
Agricultural engineering .....	38	38	38	38	38	39	40	38
Biomedical engineering .....	57	59	61	64	72	77	81	81
Chemical engineering .....	141	141	143	144	145	147	149	147
Civil engineering .....	210	216	225	231	237	243	250	253
Electrical engineering .....	219	224	228	234	241	238	247	246
Engineering science .....	41	39	36	36	38	40	39	38
Industrial /manufacturing eng. ....	158	161	164	167	168	164	172	175
Mechanical engineering .....	183	185	185	187	190	188	191	190
Metallurgical/materials eng. ....	104	106	107	112	114	112	110	108
Mining engineering .....	29	26	24	24	24	24	25	24
Nuclear engineering .....	26	26	24	23	24	24	24	23
Petroleum engineering .....	19	20	19	18	17	16	18	17
Engineering, n.e.c. ....	81	90	92	96	100	102	109	107

See explanatory information, if any, and SOURCE at end of table.



**Technical Table 2. Number of science, engineering, and health departments  
in doctorate-granting institutions, by detailed field: 1994-2001**

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Field	1994	1995	1996	1997	1998	1999	2000	2001
Total, health fields .....	2,796	2,850	2,874	2,833	2,852	2,895	2,894	2,924
Medical fields, total .....	2,081	2,120	2,121	2,062	2,061	2,081	2,041	2,038
Anesthesiology .....	87	87	89	88	88	85	86	87
Cardiology .....	70	71	71	71	71	72	71	70
Oncology/cancer research .....	50	55	57	62	63	71	70	74
Endocrinology .....	74	74	74	71	71	72	70	68
Gastroenterology .....	71	71	71	68	68	68	68	67
Hematology .....	73	73	72	71	69	72	71	70
Neurology .....	154	155	152	155	157	164	162	164
Obstetrics and gynecology .....	96	96	95	90	91	91	88	88
Ophthalmology .....	80	80	78	78	78	78	76	76
Otorhinolaryngology .....	72	72	72	68	64	64	62	63
Pediatrics .....	115	116	118	111	112	110	110	109
Preventive medicine/community health .....	181	186	187	186	193	198	196	193
Psychiatry .....	107	107	104	102	101	100	98	98
Pulmonary disease .....	68	69	68	66	67	66	64	64
Radiology .....	139	141	138	134	129	131	128	127
Surgery .....	251	257	259	245	244	246	240	239
Clinical medicine, n.e.c. ....	393	410	416	396	395	393	381	381
Other health fields, total .....	715	730	753	771	791	814	853	886
Dental sciences .....	88	87	86	81	78	79	82	83
Nursing .....	138	144	142	148	152	156	157	163
Pharmaceutical sciences .....	89	90	93	91	92	91	86	86
Speech pathology/audiology .....	132	133	135	139	141	142	150	155
Veterinary sciences .....	47	48	48	49	51	54	62	61
Health related, n.e.c. ....	221	228	249	263	277	292	316	338

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 3. Number of science, engineering, and health departments  
in master's-granting institutions, by detailed field: 1994-2001**

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Field	1994	1995	1996	1997	1998	1999	2000	2001
Total, all surveyed fields .....	1,583	1,610	1,587	1,584	1,571	1,613	1,581	1,548
Total, science and engineering fields .....	1,378	1,390	1,359	1,348	1,329	1,356	1,310	1,283
Sciences, total .....	1,186	1,195	1,171	1,162	1,153	1,164	1,135	1,097
Physical sciences, total .....	132	129	121	121	117	116	104	96
Astronomy .....	0	0	0	0	0	0	0	0
Chemistry .....	84	80	76	75	71	72	66	63
Physics .....	34	34	31	31	30	30	26	23
Physical sciences, n.e.c. ....	14	15	14	15	16	14	12	10
Earth, atmos., & ocean sci., total .....	57	63	61	63	62	64	65	64
Atmospheric sciences .....	1	2	2	2	2	1	1	1
Geosciences .....	28	29	28	28	27	29	31	31
Oceanography .....	7	7	6	7	7	8	8	7
Earth, atmos., & ocean sci., n.e.c. ....	21	25	25	26	26	26	25	25
Mathematical sciences, total .....	113	113	111	111	108	110	101	93
Mathematics & applied mathematics .....	107	107	106	106	103	105	97	88
Statistics .....	6	6	5	5	5	5	4	5
Computer sciences .....	94	95	95	91	89	92	97	98
Agricultural sciences .....	34	35	33	31	33	30	27	27
Biological sciences, total .....	183	187	182	178	175	179	179	177
Anatomy .....	0	0	0	0	0	0	0	0
Biochemistry .....	5	5	5	4	4	3	3	3
Biology .....	137	137	136	133	131	133	127	123
Biometry/epidemiology .....	0	0	0	0	0	0	0	0
Biophysics .....	0	0	0	0	0	0	0	0
Botany .....	2	2	2	2	2	2	2	2
Cell biology .....	1	2	1	3	3	3	4	5
Ecology .....	3	3	2	3	4	4	5	5
Entomology/parasitology .....	0	0	0	0	0	0	0	0
Genetics .....	1	1	1	1	1	2	2	2
Microbio., immunology, & virology .....	2	2	2	3	2	2	3	3
Nutrition .....	16	18	17	14	14	15	14	13
Pathology .....	2	2	2	1	1	1	1	1
Pharmacology .....	0	0	0	0	1	1	1	1
Physiology .....	0	0	0	0	0	1	2	2
Zoology .....	2	2	2	2	2	2	2	2
Biosciences, n.e.c. ....	12	13	12	12	10	10	13	15
Psychology, total .....	246	243	244	249	244	250	249	232
Psychology, general .....	95	94	95	92	90	90	89	85
Clinical psychology .....	35	35	35	37	36	39	40	34
Psychology, n.e.c. ....	116	114	114	120	118	121	120	113
Social sciences, total .....	327	330	324	318	325	323	313	310
Agricultural economics .....	4	4	4	4	3	3	2	2
Anthropology (cultural & social) .....	11	11	11	11	11	13	13	13
Economics (except agricultural) .....	36	37	37	36	37	36	32	31
Geography .....	25	25	24	23	23	25	23	22
History and philosophy of science .....	0	0	0	0	2	2	3	4
Linguistics .....	7	7	7	7	7	7	7	7
Political science .....	115	117	115	112	112	112	112	108
Sociology .....	48	49	46	46	47	46	42	40
Sociology/anthropology .....	3	3	3	3	2	2	2	2
Social sciences, n.e.c. ....	78	77	77	76	81	77	77	81
Engineering, total .....	192	195	188	186	176	192	175	186
Aerospace engineering .....	4	4	3	3	3	3	3	3
Agricultural engineering .....	0	0	0	0	0	0	0	0
Biomedical engineering .....	4	4	3	4	4	4	4	4
Chemical engineering .....	8	9	9	8	7	7	6	7
Civil engineering .....	34	37	37	35	31	31	28	29
Electrical engineering .....	46	48	48	47	43	49	45	47
Engineering science .....	2	2	2	2	2	2	2	3
Industrial /manufacturing eng. ....	30	32	30	28	30	33	29	30
Mechanical engineering .....	26	27	25	24	23	26	23	26
Metallurgical/materials eng. ....	8	7	6	7	5	6	4	5
Mining engineering .....	4	2	2	2	2	2	2	2
Nuclear engineering .....	0	0	0	0	0	0	0	0
Petroleum engineering .....	2	2	2	1	1	1	1	1
Engineering, n.e.c. ....	24	21	21	25	25	28	28	29

See explanatory information, if any, and SOURCE at end of table.

**Technical Table 3. Number of science, engineering, and health departments  
in master's-granting institutions, by detailed field: 1994-2001**

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Field	1994	1995	1996	1997	1998	1999	2000	2001
Total, health fields .....	205	220	228	236	242	257	271	265
Medical fields, total .....	19	20	18	18	20	20	20	21
Anesthesiology .....	4	4	3	4	4	4	4	4
Cardiology .....	0	0	0	0	0	0	0	0
Oncology/cancer research .....	0	0	0	0	0	0	0	0
Endocrinology .....	0	0	0	0	0	0	0	0
Gastroenterology .....	0	0	0	0	0	0	0	0
Hematology .....	0	0	0	0	0	0	0	0
Neurology .....	0	0	0	0	0	0	0	0
Obstetrics and gynecology .....	0	0	0	0	0	0	0	0
Ophthalmology .....	1	1	1	1	1	0	0	0
Otorhinolaryngology .....	0	0	0	0	0	0	0	0
Pediatrics .....	0	0	0	0	0	0	0	0
Preventive medicine/community health .....	9	9	9	8	9	9	8	8
Psychiatry .....	2	2	1	1	1	1	1	1
Pulmonary disease .....	0	0	0	0	0	0	0	0
Radiology .....	0	1	1	1	1	1	1	1
Surgery .....	0	0	0	0	0	0	0	0
Clinical medicine, n.e.c. ....	3	3	3	3	4	5	6	7
Other health fields, total .....	186	200	210	218	222	237	251	244
Dental sciences .....	0	0	0	0	0	0	0	0
Nursing .....	60	69	72	75	76	82	87	87
Pharmaceutical sciences .....	1	1	1	1	2	2	2	2
Speech pathology/audiology .....	60	62	65	65	66	69	70	64
Veterinary sciences .....	1	1	1	1	1	1	0	1
Health related, n.e.c. ....	64	67	71	76	77	83	92	90

**KEY:** n.e.c. = Not elsewhere classified

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 4. Original departmental response rates: 1975-2001**

Year	Total	Complete response		Partial response		Non-response	
		Number	Percent	Number	Percent	Number	Percent
1975 <sup>1</sup> .....	9,162	8,998	98.2	na	na	na	na
1976 .....	9,275	9,148	98.6	na	na	na	na
1977 .....	9,513	9,432	99.1	na	na	na	na
1978 <sup>2</sup> .....	8,242	8,077	98.0	na	na	na	na
1979 .....	9,796	9,446	96.4	na	na	na	na
1980 .....	9,930	9,593	96.6	na	na	na	na
1981 .....	9,917	8,594	86.7	613	6.2	710	7.2
1982 .....	9,776	8,104	82.9	744	7.6	928	9.5
1983 .....	9,663	8,070	83.5	816	8.4	777	8.0
1984 <sup>3</sup> .....	8,748	7,490	85.6	643	7.4	615	7.0
1985 <sup>3</sup> .....	9,025	7,818	86.6	672	7.4	535	5.9
1986 <sup>3</sup> .....	9,097	7,817	85.9	779	8.6	501	5.5
1987 <sup>3</sup> .....	9,254	8,030	86.8	715	7.7	509	5.5
1988 .....	10,295	8,812	85.6	970	9.4	513	5.0
1989 .....	10,318	8,908	86.3	891	8.6	519	5.0
1990 .....	10,483	8,884	84.7	1,053	10.0	546	5.2
1991 .....	10,705	9,052	84.6	1,186	11.1	467	4.4
1992 .....	10,936	9,066	82.9	1,538	14.1	332	3.0
1993 .....	11,146	9,156	82.1	1,555	14.0	435	3.9
1994 .....	11,411	8,863	77.7	2,109	18.5	439	3.8
1995 .....	11,598	9,514	82.0	1,730	14.9	354	3.1
1996 .....	11,592	9,851	85.0	1,522	13.1	219	1.9
1997 .....	11,597	9,720	83.8	1,665	14.4	212	1.8
1998 .....	11,718	9,822	83.8	1,706	14.6	190	1.6
1999 .....	11,833	9,396	79.4	2,289	19.3	148	1.3
2000 .....	11,899	9,818	82.5	1,965	16.5	116	1.0
2001 .....	11,967	10,121	84.6	1,731	14.5	115	1.0

<sup>1</sup> The 1976 survey also collected 1975 data from master's-granting institutions.

<sup>2</sup> Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

<sup>3</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**KEY:** na = Not available

**NOTE:** Departments providing partial responses are included in the complete response column prior to 1981 and reported separately beginning in 1981.

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 5. Imputation for nonresponse in doctorate-granting institutions,  
by field and enrollment status: 1999-2001**

Area of science and engineering	Number of graduate departments		Graduate enrollment								
			Total in survey			Number imputed			Imputation rate (percent)		
	In universe	Totally imputed	Full-time	Part-time	Postdoc-torates	Full-time	Part-time	Postdoc-torates	Full-time	Part-time	Postdoc-torates
Total, all areas .....	10,420	109	330,043	122,368	42,899	2,232	2,695	156	0.7	2.2	0.4
	589	3	26,721	3,256	6,152	12	16	0	.0	.5	.0
	362	2	10,014	2,610	1,035	60	24	0	.6	.9	.0
	398	4	11,992	3,093	352	44	55	0	.4	1.8	.0
	334	7	26,977	16,883	357	401	283	0	1.5	1.7	.0
	336	2	8,649	2,336	794	14	8	0	.2	.3	.0
	1,986	19	46,676	7,423	16,913	299	338	90	.6	4.6	.5
	610	16	28,471	10,860	828	352	312	3	1.2	2.9	.4
	1,379	23	50,792	23,855	427	295	442	0	.6	1.9	.0
	1,502	8	75,703	27,761	3,113	137	180	27	.2	.6	.9
	2,924	25	44,048	24,291	12,928	618	1,037	36	1.4	4.3	.3
	Total, all areas .....	10,318	103	315,724	118,576	43,044	2,126	2,236	122	0.7	1.9
583		3	26,089	3,247	6,202	12	17	0	.0	.5	.0
362		1	10,102	2,605	1,155	3	24	0	.0	.9	.0
390		3	11,130	2,693	383	24	40	0	.2	1.5	.0
320		5	23,242	16,390	363	130	243	0	.6	1.5	.0
331		0	8,661	2,236	784	0	0	0	.0	.0	.0
1,974		11	45,305	7,210	16,764	271	83	64	.6	1.2	.4
593		16	28,338	9,506	728	535	262	1	1.9	2.8	.1
1,359		21	48,816	23,056	467	338	590	2	.7	2.6	.4
1,512		14	70,878	28,086	3,309	177	192	13	.2	.7	.4
2,894		29	43,163	23,547	12,889	636	785	42	1.5	3.3	.3
Total, all areas .....		10,216	122	308,502	122,296	40,667	4,296	2,991	472	1.4	2.4
	578	8	26,128	3,323	6,092	328	41	42	1.3	1.2	.7
	358	3	10,029	2,761	923	47	1	6	.5	.0	.7
	386	6	11,137	3,051	351	110	42	0	1.0	1.4	.0
	305	6	20,073	15,003	330	219	177	0	1.1	1.2	.0
	328	4	8,634	2,482	704	178	77	8	2.1	3.1	1.1
	1,980	14	45,178	7,678	16,123	500	155	210	1.1	2.0	1.3
	586	13	28,461	10,527	710	626	425	10	2.2	4.0	1.4
	1,330	23	49,473	23,492	454	660	742	5	1.3	3.2	1.1
	1,470	16	66,004	29,329	3,187	668	633	39	1.0	2.2	1.2
	2,895	29	43,385	24,650	11,793	960	698	152	2.2	2.8	1.3

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 6. Imputation for nonresponse in master's-granting institutions,  
by field and enrollment status: 1999-2001**

Area of science and engineering	Number of graduate departments		Graduate enrollment									
			Total in survey			Number imputed			Imputation rate (percent)			
	In universe	Totally imputed	Full-time	Part-time	Postdoc-torates	Full-time	Part-time	Postdoc-torates	Full-time	Part-time	Postdoc-torates	
	Fall 2001											
Total, all areas .....	1,548	6	25,072	32,673	90	61	96	0	0.2	0.3	0.0	
Physical sciences .....	96	1	408	603	60	4	0	0	1.0	.0	.0	
Earth, atmospheric, & ocean sciences .....	64	0	490	727	0	0	0	0	.0	.0	0	
Mathematical sciences .....	93	0	506	1,072	2	0	0	0	.0	.0	.0	
Computer sciences .....	98	0	3,121	5,215	4	0	0	0	.0	.0	.0	
Agricultural sciences .....	27	0	553	373	5	0	0	0	.0	.0	.0	
Biological sciences .....	177	3	1,675	2,052	8	11	19	0	.7	.9	.0	
Psychology .....	232	1	6,062	5,405	2	38	17	0	.6	.3	.0	
Social sciences .....	310	0	3,797	7,319	1	0	0	0	.0	.0	.0	
Engineering .....	186	0	1,869	4,173	5	0	0	0	.0	.0	.0	
Health fields .....	265	1	6,591	5,734	3	8	60	0	.1	1.0	.0	
	Fall 2000											
Total, all areas .....	1,581	13	26,381	34,016	93	186	583	0	0.7	1.7	0.0	
Physical sciences .....	104	0	463	664	68	0	0	0	.0	.0	.0	
Earth, atmospheric, & ocean sciences .....	65	0	457	776	0	0	0	0	.0	.0	0	
Mathematical sciences .....	101	1	602	1,221	2	4	7	0	.7	.6	.0	
Computer sciences .....	97	1	3,402	4,560	3	21	63	0	.6	1.4	.0	
Agricultural sciences .....	27	0	452	335	2	0	0	0	.0	.0	.0	
Biological sciences .....	179	2	1,721	2,258	6	54	18	0	3.1	.8	.0	
Psychology .....	249	3	6,743	6,117	2	69	88	0	1.0	1.4	.0	
Social sciences .....	313	5	3,913	7,689	4	34	312	0	.9	4.1	.0	
Engineering .....	175	0	1,706	4,014	4	0	0	0	.0	.0	.0	
Health fields .....	271	1	6,922	6,382	2	4	95	0	.1	1.5	.0	
	Fall 1999											
Total, all areas .....	1,613	22	25,919	36,693	104	537	694	0	2.1	1.9	0.0	
Physical sciences .....	116	2	507	733	65	1	2	0	.2	.3	.0	
Earth, atmospheric, & ocean sciences .....	64	0	455	838	2	0	0	0	.0	.0	.0	
Mathematical sciences .....	110	1	659	1,410	0	5	7	0	.8	.5	0	
Computer sciences .....	92	0	2,635	4,849	4	0	0	0	.0	.0	.0	
Agricultural sciences .....	30	0	522	350	8	0	0	0	.0	.0	.0	
Biological sciences .....	179	3	1,929	2,330	6	65	33	0	3.4	1.4	.0	
Psychology .....	250	7	6,244	6,632	6	272	265	0	4.4	4.0	.0	
Social sciences .....	323	4	3,824	8,219	0	25	275	0	.7	3.3	0	
Engineering .....	192	0	2,019	4,339	9	0	0	0	.0	.0	.0	
Health fields .....	257	5	7,125	6,993	4	169	112	0	2.4	1.6	.0	

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 7. Imputation rates for all departments  
at all graduate institutions: Fall 2001**

[ Number of imputed departments = 1,846 ]

**Item 5. Full-time graduate students by source and mechanism of the largest amount of support received**

Mechanism of support and sex of S&E full-time S&E graduate students	Students receiving financial assistance											Self support (includ. loans & family sources)	Total for all sources (sum of columns A - L)
	Federal sources (excluding loans)								Non-Federal sources				
	DoD	HHS		NSF	Dept. of Agr.	NASA	DOE	Other Federal sources	Inst. support	Foreign sources	Other U.S. sources		
		NIH	Other HHS										
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	
Full-time graduate S&E students:													
Graduate fellowships .....	14.1	4.8	6.8	8.9	10.4	10.2	10.7	5.4	8.6	8.8	11.9	N/A	8.4
Graduate traineeships .....	6.7	9.1	12.3	18.4	43.8	1.9	0.0	7.2	10.0	12.3	20.1	N/A	10.3
Graduate research asstships .....	15.3	12.4	2.7	13.8	8.6	14.4	3.1	14.8	11.4	8.5	12.8	N/A	11.5
Graduate teaching asstships .....	N/A	0.0	1.9	4.9	8.7	0.0	0.0	4.8	11.5	N/A	16.8	N/A	10.4
Other types of support .....	6.3	5.3	0.4	7.8	0.0	0.0	0.0	10.9	13.4	12.2	11.7	19.0	17.5
Full-time total .....	13.4	10.7	8.3	12.9	8.8	13.2	3.3	11.6	11.2	10.2	12.9	19.0	0.6
Full-time women .....	15.1	10.8	11.3	10.9	9.4	12.0	3.3	12.4	12.7	14.1	12.8	21.6	1.3

**Items 6 and 7. Race/ethnicity of part-time and full-time graduate students by sex**

Enrollment status and sex of S&E graduate students	U.S. citizens and permanent residents									Foreign (temporary visa holders)	Total (sum of columns A - J)
	One race only: Non-Hispanic/Latino					One race only	More than one race		Unknown		
	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	White	Hispanic/ Latino	Hispanic/ Latino	Non- Hispanic/ Latino			
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)			
Item 6											
Part-time, total .....	6.1	1.4	2.7	0.4	3.5	1.9	0.0	0.0	4.6	4.9	1.8
Men enrolled part-time .....	5.0	2.6	2.5	0.5	3.1	1.9	0.0	0.0	3.5	5.0	2.3
Women enrolled part-time .....	6.6	0.5	2.9	0.4	3.8	1.9	0.0	0.0	5.9	4.7	2.8
Item 7											
Full-time, total .....	5.1	1.0	1.5	7.9	3.3	1.0	0.3	0.7	1.9	3.8	0.6
Men enrolled full-time .....	4.6	1.1	1.6	7.0	4.0	1.2	0.7	1.6	2.9	4.1	1.9
Women enrolled full-time .....	5.6	1.1	1.7	8.6	3.1	1.1	0.1	8.1	1.1	3.1	1.3
Full-time first-time total .....	2.9	0.3	2.8	0.0	4.1	1.6	0.0	1.7	2.0	3.2	0.4
Full-time first-time women .....	2.8	0.5	2.0	0.0	3.5	1.2	0.0	0.0	1.4	3.7	0.6

**Item 8. S&E postdoctorates and nonfaculty research staff with doctorates**

Sex and type of doctorate	Postdoctorates						Other non-faculty research staff with doctorates
	Source of support				Total for all sources (A - D)	Foreign postdoctorates	
	Federal			Non-Federal			
	Fellowships	Traineeships	Research grants				
	(A)	(B)	(C)	(D)	(E)	(F)	
Total .....	12.7	4.9	4.6	5.3	0.4	1.9	1.8
Women .....	11.5	4.6	4.4	5.1	2.1	1.9	1.7
With MD, DO, DDS or DVM degrees ....	17.4	3.1	3.6	3.1	1.8	2.0	0.9

**KEY:** DoD = Department of Defense  
 DOE = Department of Energy  
 HHS = Department of Health & Human Services  
 NASA = National Aeronautics & Space Administration  
 NIH = National Institutes of Health  
 NSF = National Science Foundation  
 N/A = Not applicable

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering

**Technical Table 8. Comparison of graduate enrollment data as originally published and as modified through the fall 2001 graduate student survey cycle: 1975-2001**

Page 1 of 2

Year	Total, all institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	Percent change	Original total	Revised total	Percent change	Original total	Revised total	Percent change
Total graduate enrollment in surveyed fields									
1975 <sup>1</sup> .....	336,843	328,510	-2.5	290,662	285,810	-1.7	46,181	42,700	-7.5
1976 .....	345,979	333,716	-3.5	297,280	289,004	-2.8	48,699	44,712	-8.2
1977 .....	362,978	345,374	-4.8	306,710	295,911	-3.5	56,268	49,463	-12.1
1978 <sup>2</sup> .....	na	339,912	na	311,982	298,884	-4.2	na	41,028	na
1979 .....	375,267	357,578	-4.7	321,770	306,600	-4.7	53,497	50,978	-4.7
1980 .....	383,210	367,078	-4.2	333,658	320,298	-4.0	49,552	46,780	-5.6
1981 .....	392,034	375,130	-4.3	340,203	324,425	-4.6	51,831	50,705	-2.2
1982 .....	399,682	382,291	-4.4	347,414	332,735	-4.2	52,268	49,556	-5.2
1983 .....	413,564	390,432	-5.6	358,276	339,043	-5.4	55,288	51,389	-7.1
1984 <sup>3</sup> .....	415,064	394,670	-4.9	363,470	344,744	-5.2	51,594	49,926	-3.2
1985 <sup>3</sup> .....	434,836	404,021	-7.1	371,052	352,945	-4.9	63,784	51,076	-19.9
1986 <sup>3</sup> .....	446,102	415,520	-6.9	384,203	364,245	-5.2	61,899	51,275	-17.2
1987 <sup>3</sup> .....	449,585	421,497	-6.2	388,681	370,201	-4.8	60,904	51,296	-15.8
1988 .....	445,595	424,523	-4.7	391,683	376,337	-3.9	53,912	48,186	-10.6
1989 .....	440,983	434,478	-1.5	385,025	383,040	-.5	55,958	51,438	-8.1
1990 .....	458,943	452,113	-1.5	398,405	397,762	-.2	60,538	54,351	-10.2
1991 .....	475,691	471,212	-.9	411,296	412,879	.4	64,395	58,333	-9.4
1992 .....	495,397	493,522	-.4	427,792	431,573	.9	67,605	61,949	-8.4
1993 .....	506,678	504,304	-.5	440,875	439,779	-.2	65,803	64,525	-1.9
1994 .....	506,626	504,399	-.4	441,480	440,168	-.3	65,146	64,231	-1.4
1995 .....	501,510	499,640	-.4	436,328	434,377	-.4	65,182	65,263	.1
1996 .....	494,526	494,079	-.1	430,631	429,890	-.2	63,895	64,189	.5
1997 .....	487,104	487,208	.0	424,650	424,608	.0	62,454	62,600	.2
1998 .....	485,754	485,627	.0	422,834	423,928	.3	62,920	61,699	-1.9
1999 .....	493,425	493,410	.0	432,657	430,798	-.4	60,768	62,612	3.0
2000 .....	494,594	494,671	.0	435,612	434,274	-.3	58,982	60,397	2.4
2001 .....	510,156	na	na	452,411	na	na	57,745	na	na
Full-time									
1975 <sup>1</sup> .....	228,316	219,648	-3.8	210,641	203,861	-3.2	17,675	15,787	-10.7
1976 .....	233,748	223,412	-4.4	215,355	207,043	-3.9	18,393	16,369	-11.0
1977 .....	238,202	226,738	-4.8	218,226	209,431	-4.0	19,976	17,307	-13.4
1978 <sup>2</sup> .....	na	223,030	na	217,588	208,527	-4.2	na	14,503	na
1979 .....	243,331	231,760	-4.8	224,057	214,071	-4.5	19,274	17,689	-8.2
1980 .....	249,111	238,416	-4.3	230,601	221,079	-4.1	18,510	17,337	-6.3
1981 .....	253,428	242,049	-4.5	234,529	224,331	-4.3	18,899	17,718	-6.2
1982 .....	255,959	244,757	-4.4	237,676	227,825	-4.1	18,283	16,932	-7.4
1983 .....	263,800	252,017	-4.5	243,646	233,565	-4.1	20,154	18,452	-8.4
1984 <sup>3</sup> .....	264,146	253,922	-3.9	246,848	236,388	-4.2	17,298	17,534	1.4
1985 <sup>3</sup> .....	269,319	257,287	-4.5	249,666	239,673	-4.0	19,653	17,614	-10.4
1986 <sup>3</sup> .....	279,235	266,168	-4.7	259,980	248,741	-4.3	19,255	17,427	-9.5
1987 <sup>3</sup> .....	285,200	271,056	-5.0	264,862	253,572	-4.3	20,338	17,484	-14.0
1988 .....	288,619	275,127	-4.7	268,385	258,896	-3.5	20,234	16,231	-19.8
1989 .....	286,619	282,648	-1.4	267,554	265,796	-.7	19,065	16,852	-11.6
1990 .....	295,836	292,782	-1.0	275,262	274,604	-.2	20,574	18,178	-11.6
1991 .....	308,669	307,010	-.5	286,756	286,741	.0	21,913	20,269	-7.5
1992 .....	323,399	322,555	-.3	299,753	300,482	.2	23,646	22,073	-6.7
1993 .....	330,249	329,644	-.2	307,181	306,632	-.2	23,068	23,012	-.2
1994 .....	331,969	332,088	.0	307,964	308,279	.1	24,005	23,809	-.8
1995 .....	330,235	329,283	-.3	305,652	304,738	-.3	24,583	24,545	-.2
1996 .....	328,368	328,536	.1	303,586	303,653	.0	24,782	24,883	.4
1997 .....	326,842	327,289	.1	301,573	301,976	.1	25,269	25,313	.2
1998 .....	327,609	327,389	-.1	301,544	301,936	.1	26,065	25,453	-2.3
1999 .....	334,405	334,421	.0	309,466	308,502	-.3	24,939	25,919	3.9
2000 .....	342,121	342,079	.0	316,531	315,698	-.3	25,590	26,381	3.1
2001 .....	355,115	na	na	330,043	na	na	25,072	na	na

See explanatory information, if any, and SOURCE at end of table.



**Technical Table 8. Comparison of graduate enrollment data as originally published and as modified through the fall 2001 graduate student survey cycle: 1975-2001**

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Year	Total, all institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	Percent change	Original total	Revised total	Percent change	Original total	Revised total	Percent change
Part-time									
1975 <sup>1</sup> .....	108,527	108,862	0.3	80,021	81,949	2.4	28,506	26,913	-5.6
1976 .....	112,231	110,304	-1.7	81,925	81,961	.0	30,306	28,343	-6.5
1977 .....	124,776	118,636	-4.9	88,484	86,480	-2.3	36,292	32,156	-11.4
1978 <sup>2</sup> .....	na	116,882	na	94,394	90,357	-4.3	na	26,525	na
1979 .....	131,936	125,818	-4.6	97,713	92,529	-5.3	34,223	33,289	-2.7
1980 .....	134,099	128,662	-4.1	103,057	99,219	-3.7	31,042	29,443	-5.2
1981 .....	138,606	133,081	-4.0	105,674	100,094	-5.3	32,932	32,987	.2
1982 .....	143,723	137,534	-4.3	109,738	104,910	-4.4	33,985	32,624	-4.0
1983 .....	149,764	138,415	-7.6	114,630	105,478	-8.0	35,134	32,937	-6.3
1984 <sup>3</sup> .....	150,918	140,748	-6.7	116,622	108,356	-7.1	34,296	32,392	-5.6
1985 <sup>3</sup> .....	165,517	146,734	-11.3	121,386	113,272	-6.7	44,131	33,462	-24.2
1986 <sup>3</sup> .....	166,867	149,352	-10.5	124,223	115,504	-7.0	42,644	33,848	-20.6
1987 <sup>3</sup> .....	164,385	150,441	-8.5	123,819	116,629	-5.8	40,566	33,812	-16.6
1988 .....	156,976	149,396	-4.8	123,298	117,441	-4.8	33,678	31,955	-5.1
1989 .....	154,364	151,830	-1.6	117,471	117,244	-.2	36,893	34,586	-6.3
1990 .....	163,107	159,331	-2.3	123,143	123,158	.0	39,964	36,173	-9.5
1991 .....	167,022	164,202	-1.7	124,540	126,138	1.3	42,482	38,064	-10.4
1992 .....	171,998	170,967	-.6	128,039	131,091	2.4	43,959	39,876	-9.3
1993 .....	176,429	174,660	-1.0	133,694	133,147	-.4	42,735	41,513	-2.9
1994 .....	174,657	172,311	-1.3	133,516	131,889	-1.2	41,141	40,422	-1.7
1995 .....	171,275	170,357	-.5	130,676	129,639	-.8	40,599	40,718	.3
1996 .....	166,158	165,543	-.4	127,045	126,237	-.6	39,113	39,306	.5
1997 .....	160,262	159,919	-.2	123,077	122,632	-.4	37,185	37,287	.3
1998 .....	158,145	158,238	.1	121,290	121,992	.6	36,855	36,246	-1.7
1999 .....	159,020	158,989	.0	123,191	122,296	-.7	35,829	36,693	2.4
2000 .....	152,473	152,592	.1	119,081	118,576	-.4	33,392	34,016	1.9
2001 .....	155,041	na	na	122,368	na	na	32,673	na	na

<sup>1</sup> The 1976 survey also collected 1975 data from master's-granting institutions.

<sup>2</sup> Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

<sup>3</sup> These figures include estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984-87. See "Technical Notes" for further information.

**NOTE:** The percent change column is presented as a measure of retroactive changes in survey definitions. Three survey changes in the late 1980s and early 1990s had a retroactive effect on figures reported for earlier years. First, degree-granting status (doctorate or master's) used to be determined by an institution's status each year. Beginning in 1992, degree-granting status was determined by the status reported in the latest survey year. This change shifted numerous institutions (and students) from master's-granting to doctorate-granting categories for years before 1992. Second, in 1988 guidelines to determine S&E departments were tightened. This change meant retroactively dropping departments in fields like educational psychology, social work, and cultural studies from the survey population. Third, improved estimates were generated for years in which enrollments at master's-granting institutions were sampled (1984-87).

**KEY:** na = Not available

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Graduate Students and Postdoctorates in Science and Engineering